



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 1 of 8

# SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:		COMMENTS:
	RECOVERY	TYPE-# <small>SS=Split Spoon ST=Shelby Tube</small>		6-6-6 (in) (N)	SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0	0-0.3	---	-----	-----	- 4" Asphalt, 6" of coarse gravel and sand (road base). PID = 0.0	PID = 0.0
0.5	0.3-4	---	-----	-----	- LEAN CLAY (CL), dark reddish brown, moist	
1					-	
1.5					-	
2					-	
2.5					-	
3					-	
3.5					-	
4	4-9	---	-----	-----	- SAND (SP), light olive brown (2.5Y 5/6), dry, loose, fine	PID = 0.0
4.5		5/5'			- grained	
5					-	
5.5					-	
6					-	
6.5					-	
7					-	
7.5					-	
8					-	
8.5					-	
9	9-14	---	-----	-----	- Same as above (SP)	PID = 0.0. Zones of weak cementation from 9-11'
9.5		5/5'			-	bgs
10					-	
10.5					-	
11					-	
11.5					-	
12					-	
12.5					-	



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 2 of 8

# SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)				STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:	COMMENTS:
INTERVAL (ft)					SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
RECOVERY		TYPE-# <small>SS-Split Spoon ST-Shelby Tube</small>		6-6-6 (in) (N)		
13					-	
13.5					-	
14	14-17	----	-----	-----	- SILT (ML), brown (10YR 5/3), dry, firm, weakly cemented	PID = 0.0
14.5		4/5'			-	
15					-	
15.5					-	
16					-	
16.5					-	
17	17-19	----	-----	-----	- SILTY SAND (SW), strong brown (7.5YR 5/6), dry, loose, fine - grained	
17.5					-	
18					-	
18.5					-	
19	19-24	----	-----	-----	- SAND (SP), dark reddish brown (5YR 3/3), wet, fine to - medium grained, little coarse grained, zones of weak - cementation	PID = 0.0
19.5		3/5'			-	
20					-	
20.5					-	
21					-	
21.5					-	
22					-	
22.5					-	
23					-	
23.5					-	
24	24-29	----	-----	-----	- SILTY SAND (SW), reddish brown (5YR 4/4), moist, - loose/soft, fine grained	PID = 0.0
24.5		5/5'			-	
25					-	



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 3 of 8

# SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:		COMMENTS:	
	RECOVERY	TYPE-# <small>SS=Split Spoon ST=Shelby Tube</small>		6-6-6 (in) (N)	SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
25.5					-		
26					-		
26.5					-		
27					-		
27.5					-		
28					-		
28.5					-		
29	29-34	3.5/5'		- Same as above (SW)		PID = 0.0	
29.5					-		
30					-		
30.5					-		
31					-		
31.5					-		
32					-		
32.5					-		
33					-		
33.5					-		
34	34-36.5			- Same as above (SW)			
34	34-39	5/5'				PID = 0.0	
34.5					-		
35					-		
35.5					-		
36					-		
36.5	36.5-39			- SAND (SP), dark yellowish brown (10YR 4/4), saturated, fine - to medium grained, weak cementation			
37					-		
37.5					-		



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 4 of 8

## SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)		STANDARD PENETRATION TEST RESULTS		CORE DESCRIPTION:		COMMENTS:	
INTERVAL (ft)				SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.	
RECOVERY							
		TYPE-#	6-6-6 (in) (N)				
		SS-Split Spoon ST-Shelby Tube					
38					-		
38.5					-		
39	39-44	----	-----	-----	- Same as above (SP), fine grained		
39.5		4/5'	--		-		
40					-		
40.5					-		
41					-		
41.5					-		
42					-		
42.5	42.5-45	----	-----	-----	- SILT (ML), light olive brown (2.5Y 5/4), dry, very stiff		
43		----	-----	-----	-		Collect hydropunch sample 40C013HP43 14:00 2/9/05
43.5					-		
44	44-49	----	-----	-----	-		
44.5		5/5'	--		-		
45	45-49	----	-----	-----	- SAND (SP), dark yellowish brown (10YR 4/4), saturated, - loose, fine grained, grading to medium with trace coarse at - 48.5' bgs		
45.5					-		
46					-		
46.5					-		
47					-		
47.5					-		
48					-		
48.5					-		
49	49-54	----	-----	-----	- SILTY GRAVELLY SAND (SM), brown (7.5YR 5/3), saturated, - fine to coarse grained, cobbles to 3" diameter, gravel and - cobbles are subangular to round		Quartz rich (chert)
49.5		2/5'	--		-		
50					-		
50.5					-		



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 5 of 8

**SOIL BORING LOG**

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)	INTERVAL (ft)			STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:	COMMENTS:
	RECOVERY	TYPE-# SS-Split Spoon ST-Shelby Tube	6-6-6 (in) (N)			
				SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.	
51					-	
51.5					-	
52					-	
52.5					-	
53					-	
53.5					-	
54	54-59	0.25/5	--	-----	- Same as above (SM)	
54.5					-	
55					-	
55.5					-	
56					-	
56.5					-	
57					-	
57.5					-	
58					-	
58.5					-	
59	59-64	1.5/5'		-----	-	PID = 0.0
59.5					-	
60					-	
60.5					-	
61					-	
61.5					-	
62					-	
62.5	62.5-67			-----	- LEAN CLAY (CL), grayish brown (2.5Y 5/2), wet, very stiff, - trace coarse sand	
63				-----	-	Collect hydropunch sample 40C013HP63 15:10 2/9/05



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 6 of 8

# SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:	COMMENTS:
		RECOVERY		SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
		TYPE-# <small>SS-Split Spoon ST-Shelby Tube</small>			
63.5				-	
64	64-69	5/5'			PID = 0.6
64.5					
65					
65.5					
66					
66.5					
67	67-69			- SILTY SAND (SM), strong brown (7.5YR 5/6), moist, soft, - fine grained, some clay, low plasticity	~3" x 1.5 volcanic cobble at ~70' bgs
67.5					
68					
68.5					
69	69-74	5/5'		- Same as above (SM), fine to medium grained	PID = 0.2
69.5					
70					
70.5					
71					
71.5					
72					
72.5	72.5-74			- LEAN CLAY (CL), grayish brown (2.5Y 5/2), dry, stiff, low - plasticity	
73					
73.5					
74	74-79	5/5'		- SAND (SP), yellowish red (5YR 5/6), moist to wet, fine - grained, some silt and clay, non-plastic	PID = 0.0
74.5					
75	75-76.5				~18" layer of medium to coarse sand from 75-76.5' bgs, dark reddish brown (5YR 3/2)
75.5					



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 7 of 8

# SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:		COMMENTS:	
	RECOVERY	TYPE-# <small>SS=Split Spoon ST=Shelby Tube</small>		6-6-6 (in) (N)	SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
76					-		
76.5					-		
77					-		
77.5					-		
78					-		
78.5					-		
79	79-84	----- 5/5'	----- --	-----	- Same as above (SP), saturated, no clay		
79.5					-		
80					-		
80.5					-		
81					-		
81.5					-		
82					-		
82.5					-		
83					-		
83.5					-		
84	84-89	----- 3.5/5'	-----	-----	- Same as above (SP), with subangular gravel from 84.5-85.5'	PID = 0.0	
84.5					- bgs		
85					-		
85.5					-		
86					-		
86.5					-		
87					-		
87.5					-		
88		-----	-----	-----		Collect hydropunch sample 40C013HP88 16:45 2/9/05	
88.5					-		



PROJECT NUMBER

186368.02.07.01

BORING ID:

40C013SB

Sheet 8 of 8

## SOIL BORING LOG

PROJECT: Site 40 (AOC 73) Triad

LOCATION: SW Corner of Parking Lot of Bldg 2490

ELEVATION: NORTHING:

EASTING:

DRILLING CONTRACTOR: Water Development Corp., Zamora, CA

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger CME 85

WATER LEVELS:

START: 2/9/2005

END: 2/10/2005

LOGGER: E. Haas

DEPTH BGS (ft)			STANDARD PENETRATION TEST RESULTS	CORE DESCRIPTION:		COMMENTS:
	INTERVAL (ft)	RECOVERY		SOIL NAME (USCS GROUP SYMBOL), COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.	
		TYPE-# <small>SS-Split Spoon ST-Shelby Tube</small>				
89	89-94	----	-----	-----	-	PID = 0.0
89.5		5/5'			-	
90		----	-----	-----	- SILT (ML), light brown (7.5YR 6/4), moist to wet, stiff, - non-plastic	
90.5					-	
91					-	
91.5					-	
92					-	
92.5					-	
93					-	
93.5					-	
94	94-99	----	-----	-----	- SAND (SP), brown (7.5YR 5/3), loose, fine to medium - grained, increasing gravel with depth, subangular to - subround	PID = 0.0. Gravel to 2" diameter
94.5		5/5'			-	
95					-	
95.5					-	
96					-	
96.5					-	
97					-	
97.5					-	
98					-	
98.5					-	
99	99-100	----	-----	-----	- Same as above (SP), dark gray (7.5YR 4/1)	PID = 0.0
99.5		5/5'			-	
100		----	-----	-----	- EOB at 100' bgs	
100.5					-	
101					-	





PROJECT NUMBER	WELL NUMBER <u>400013SB</u>	SHEET 1	OF 1
<b>WELL COMPLETION DIAGRAM</b>			

PROJECT: Site 40/AOC 73

LOCATION:

DRILLING CONTRACTOR: WDC

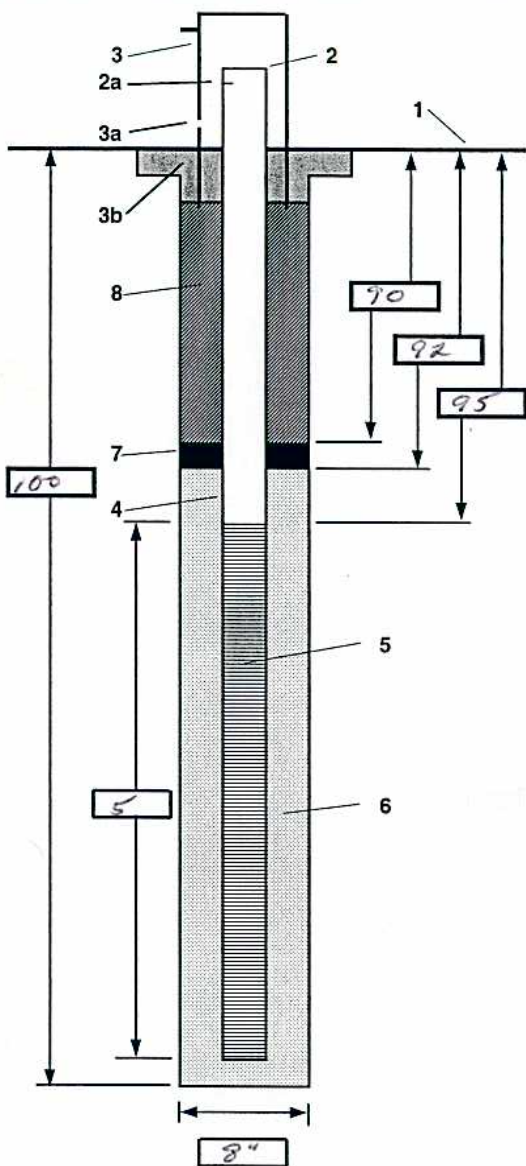
DRILLING METHOD AND EQUIPMENT USED: HSA CME 85

WATER LEVELS:

START: 6/9/05

END: 6/9/05

LOGGER: E. Haas



1- Ground elevation at well \_\_\_\_\_

2- Top of casing elevation  
a) vent hole? \_\_\_\_\_

3- Wellhead protection cover type  
a) weep hole? \_\_\_\_\_  
b) concrete pad dimensions \_\_\_\_\_

4- Dia./type of well casing 1" Schedule 40 PVC

5- Type/slot size of screen 1" Sch. 40 PVC, 0.020" slot

6- Type screen filter  
a) Quantity used #3 Monterey Sand

7- Type of seal  
a) Quantity used Med. Bentonite chips

8- Grout  
a) Grout mix used 3-5% bentonite cement  
b) Method of placement Tremie  
c) Vol. of well casing grout 12 bags (120 gal)

Development method N/A

Development time N/A

Estimated purge volume N/A

Comments Flush mount